

AMERICAN MUSEUM NOVITATES

PUBLISHED BY THE AMERICAN MUSEUM OF NATURAL HISTORY
CITY OF NEW YORK JUNE 6, 1951 NUMBER 1517

THE BUPRESTIDAE OF THE BAHAMA ISLANDS, BRITISH WEST INDIES (COLEOPTERA, BUPRESTIDAE)

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The Caribbean Island region has long been of interest to students of biogeography and, while a number of papers have been written on the subject, comparatively little is known about the fauna of the Bahama Islands as concerns its relationships with the West Indies and the United States. This is especially true of the insect fauna which to date has not been collected or treated in a comprehensive manner. A few records are available from some of the larger islands, such as New Providence and Andros, but even these are poorly known faunistically. The present paper deals primarily with a small group of the Bahama Islands from which, so far as is known, no insects have been recorded, but all available information on the buprestids from other islands in the Bahamas is included.

In the month of June of 1950 Dr. Frederick Rindge and the author had the privilege of being guests at the Lerner Marine Laboratory, located on North Bimini Island in the Bimini Island group. This group consists of three major islands, North, South, and East Bimini, all long and narrow and arranged in the form of an equilateral triangle. The longest is North Bimini, which is approximately 5 miles in length. There are several keys in the enclosed bay and a number outside. All the land is low, the highest point being about 30 feet above normal mean tide. Gun Cay, which is 6.25 nautical miles south of Bimini, was collected for a short time. These islands are the western-

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most of the Bahama Islands, lying on the western edge of the Great Bahama Bank, approximately 60 air miles from Miami, Florida, and separated from the mainland by the Gulf Stream. During most of the year the prevailing winds blow from southeast to northwest, only occasionally the reverse, and it is possible that they influence the distribution of the insects in this area. The presence of the swift currents of the Gulf Stream between these islands and the mainland precludes in large part the possibility of interchange of faunas by means of "rafts." However, there is considerable commerce between the various islands and Florida, which may be instrumental in faunal interchange, especially of the wood-boring and semi-domestic insects.

During the three weeks of actual collecting 6157 specimens of insects and spiders were obtained: Diptera, 200; Hymenoptera, 50; Coleoptera, 3821; Hemiptera and Orthoptera, 150; Odonata, 50; Lepidoptera, 1344; Arachnida, 542. Most of these were taken on one small section along the western edge of South Bimini which appeared to be less disturbed and more varied floristically than either of the others. South Bimini is infrequently visited by the natives because of their belief in a mythical spirit called "Chickcharney," to whom they attribute great powers, and who is supposed to frequent the woodlands of this island. For an excellent general account and floristic analysis of the Bimini Island group, the reader is referred to Howard (1950). East Bimini and the northeastern portion of North Bimini are uninhabited, but are less variable ecologically than South Bimini, although they apparently have species not present on the latter island. The southwestern half of North Bimini is densely populated, and natural conditions have been disturbed by the population and by the introduction of many plants. Howard reports that out of the 253 species of flowering plants collected, approximately one-third represent cultivated plants. He also reports that the vast majority of native species are common Caribbean species, five are considered as endemic to the Bahama Islands, and none is endemic on Bimini.

The present paper deals with the wood-boring beetles belonging to the family Buprestidae. Prior to this study five genera and seven species were known from the Bahama Islands, none from Bimini. In the present paper two genera, five species, and two new subspecies are added to the fauna, making a total of seven genera, 12 species, and two subspecies now known to occur

in the Bahama Islands. All seven genera, seven species, and two subspecies were taken on Bimini. On the basis of the rather scanty records assembled thus far, five species and two subspecies are endemic in the Bahamas (possibly four from Bimini), two species (one doubtfully from the Bahamas) are common to the Bahamas and West Indies, one species (one subspecies related) is common with Florida, and four species (one subspecies related) are common with the United States and the West Indies. Much collecting remains to be done in the Ba-

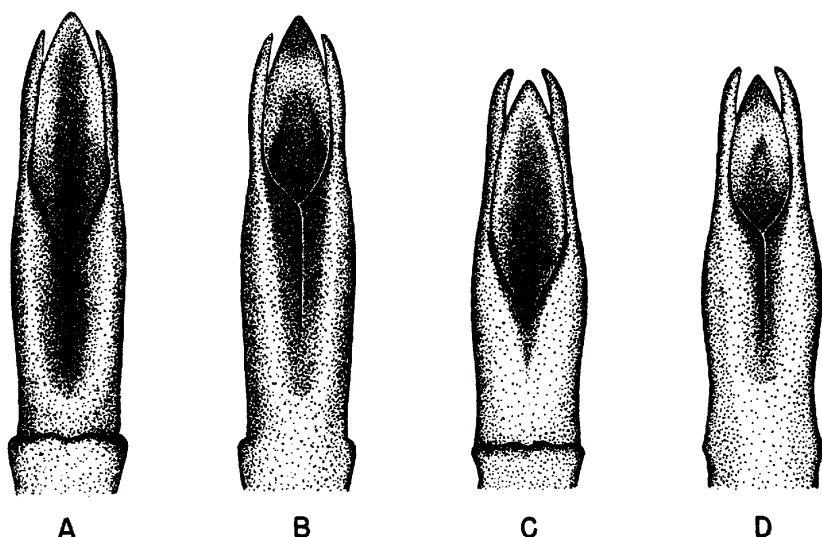


FIG. 1. A. *Chrysobothris chryseola leneri*, dorsal. B. Ventral. C. *Chrysobothris lepida*, dorsal. D. Ventral.

hamas, and additional material may change the above relationship picture considerably.

The writer is indebted to Dr. C. M. Breder, Jr., Chairman and Curator, Department of Fishes and Aquatic Biology of the American Museum of Natural History, for the opportunity of collecting material from Bimini and Gun Cay. Excellent laboratory and living quarters were made available at the Lerner Marine Laboratory, and boat transportation to the various islands was supplied whenever needed. Thanks are also extended Miss Marjorie Statham who made the drawings, and to Mr. W. S. Fisher who verified most of the determinations.

KEY TO THE GENERA

1. Scutellum visible..... 2
- Scutellum not visible..... *Acmaeodera*
2. Third tarsal segments with apices prolonged laterally, overlapping most of fourth segment..... *Actenodes*
- Third tarsal segments with apices not prolonged laterally, usually truncate..... 3
3. Metasternal episterna visible, not covered by side margins of elytra..... 4
- Metasternal episterna not visible, covered by elytral margins... *Paratyndaris*
4. First and second tarsal segments without squamose pads beneath... *Polycesta*
- First four tarsal segments with squamose pads beneath..... 5
5. Prosternal process truncate or obtusely rounded at apex..... *Psiloptera*
- Prosternal process pointed or acute at apex..... 6
6. Mesosternum completely divided medially; prosternal projection not or but slightly expanded behind anterior coxae..... *Melanophila*
- Mesosternum not completely divided medially; prosternal projection widely expanded laterally and overlapping mesosternum..... *Chrysobothris*

GENUS *ACMAEODERA*KEY TO THE SPECIES OF *Acmaeodera*

1. Abdomen with first segment testaceous medially, elytral intervals obscured by large striae punctures, showing only as fine lines; elytra narrower at base than pronotum..... *marginenotata*
- Abdomen with first segment unmaculated, elytral intervals evident and punctate; elytra wider at base than pronotum..... *wickhami*

***Acmaeodera marginenotata* Chevrolat**

Acmaeodera marginenotata CHEVROLAT, 1867, Ann. Ent. Soc. France, ser. 4, vol. 7, pp. 583, 584.

One specimen collected agrees in every respect with a specimen from Key Largo, Florida.

TYPE LOCALITY: Cuba.

NEW RECORDS FOR BAHAMA ISLANDS: South Bimini, June 13, 1950.

***Acmaeodera wickhami* Fisher**

Acmaeodera wickhami FISHER, 1925, Proc. U. S. Natl. Mus., vol. 65, art. 9, pp. 44, 45.

No specimens of this species were collected on the Bimini Islands.

TYPE LOCALITY: Eleuthera, Bahamas.

GENUS **ACTENODES****Actenodes auronotata brederi**, new subspecies

Similar in every respect to *A. auronotata* except that the elytral maculations are crimson rather than green. In five specimens the basal and lateral spots are cupreous green as in some specimens of *A. auronotata*.

TYPE MATERIAL: Holotype male, allotype female collected on South Bimini Island, Bahamas, British West Indies, June 16 and 21, 1950 (M. A. Cazier and F. Rindge). Thirty-one paratopotypes, June 10–22, and 31 paratypes from Gun Cay, Bahamas, British West Indies, June 15, 1950 (M. A. Cazier, F. Rindge). All types are in the American Museum of Natural History.

This subspecies is named in honor of Dr. Charles M. Breder, Jr.

GENUS **PARATYNDARIS****Paratyndaris suturalis** Fall

Paratyndaris suturalis FALL, 1934, Ent. News, vol. 45, p. 193.

Twenty-five specimens of this uncommon species were collected at night on dead twigs of an unidentified species of plant. Two of the specimens are almost identical in coloration with a single specimen from Key West, Florida, while the remainder are more greenish, or, in one specimen, the discs of the elytra are almost black. In some of the specimens the pronotal elevations appear to be more numerous, but this character is almost as variable as the color. The antennae are serrate, beginning with the fifth segment, as they are in the Florida specimen.

TYPE LOCALITY: Big Pine Key, Florida.

NEW RECORDS FOR BAHAMA ISLANDS: South Bimini Island, June 16–19, 1950.

GENUS **POLYCESTA**KEY TO THE SPECIES OF *Polycesta*

1. Elytra ferruginous, suture narrowly margined with nigro-aeneous; pronotal disc deeply impressed..... *manni*
- Elytra black or violaceous; pronotal disc not or only slightly impressed... 2
2. Elytra black..... 3
- Elytra violaceous (female only)..... species?
3. Scutellar carinae evident; abdomen with punctures large, dense, and deep...
..... *goryi*

- Scutellar carinae not evident; abdomen with punctures small, sparse, and shallow (female only).....species?

***Polycesta manni* Fisher**

Polycesta manni FISHER, 1925, Proc. U. S. Natl. Mus., vol. 65, art. 9, pp. 17, 18.

No specimens of this species were collected on Bimini, and only the type specimen has been available for study.

TYPE LOCALITY: Mangrove Cay, Andros Island, Bahamas.

***Polycesta goryi* Saunders**

Polycesta depressa CASTELNAU AND GORY (not Linnaeus), 1837, Histoire naturelle . . . des insectes coléoptères, vol. 2, p. 3, pl. 1, fig. 2 (name preoccupied).

Polycesta goryi SAUNDERS, 1871, Catalogus buprestidarum, p. 58.

No specimens of this species were taken on Bimini.

TYPE LOCALITY: Cayenne, Guiana.

RECORDED DISTRIBUTION IN BAHAMA ISLANDS: Water Cay.

***Polycesta* species**

Two species belonging to this genus were collected on South Bimini, but unfortunately all four specimens are females. Both species appear to be rather closely related externally to *P. goryi* recorded from Water Cay, Bahamas, and *P. angulosa* and *P. abdita* from Florida. Many of the 13 species described from the West Indies are closely related, and no study has been made of the male genitalia, which Barr (1949) found to be important in separating the United States species. It was thought advisable, therefore, to delay the identification of these two species until males are available for study. One species is large (21.5 mm.) and violaceous and the other smaller (16.5–18.5 mm.) and black. The latter is closely related to *P. angulosa* but differs by being less densely punctate beneath and by having the clypeus truncate rather than shallowly emarginate.

GENUS *PSILOPTERA*

***Psiloptera bahamica* Fisher**

Psiloptera bahamica FISHER, 1925, Proc. U. S. Natl. Mus., vol. 65, art. 9, pp. 60, 61.

Fourteen specimens were collected on the blossoms of mangrove. Nine are greenish and five have a purplish tinge, but the

color as given by Fisher (1925) for the type series is variable, and the two samples are undoubtedly conspecific.

TYPE LOCALITY: Eleuthera, Bahamas.

NEW RECORDS FOR BAHAMA ISLANDS: South Bimini, June 14-21, 1950.

GENUS **MELANOPHILA**

Melanophila notata (Castelnau and Gory)

Aptura notata CASTELNAU AND GORY, 1837, Histoire naturelle . . . des insectes coléoptères, vol. 1, p. 4.

Two maculated specimens were collected and are identical with specimens from the United States and the West Indies. Fisher (1925) records the black form from Nassau, Bahamas.

TYPE LOCALITY: "North America."

RECORDED DISTRIBUTION IN BAHAMA ISLANDS: Nassau.

NEW RECORDS FOR BAHAMA ISLANDS: South Bimini, June 27, 1950; North Bimini, June 6, 1950.

GENUS **CHRYSOBOTHRIS**

KEY TO THE SPECIES OF *Chrysobothris*

1. Elytra with green maculations 2
- Elytra without green maculations *tranquebarica*
2. Pronotal margins evenly rounded anteriorly *sexfasciata*
- Pronotal margins angulate at apical fourth 3
3. Color beneath black; form robust; male genitalia as in fig. 1A, B
- *chryseola leneri*
- Color beneath violaceous; form narrow; male genitalia as in fig. 1C, D. *lepida*

Chrysobothris tranquebarica (Gmelin)

Buprestis impressa FABRICIUS, 1787, Mantissa insectorum, vol. 1, p. 182, no. 61 (preoccupied).

Buprestis tranquebarica GMELIN, 1788, Linnaeus, Systema naturae, 13 ed., vol. 1, pt. 4, no. 4, p. 1932.

No specimens of this widespread species were collected on Bimini, but Fisher (1925) records it from Andros Island.

TYPE LOCALITY: "Indiis."

RECORDED DISTRIBUTION IN BAHAMA ISLANDS: Mangrove Cay, Andros Island.

Chrysobothris sexfasciata Schaeffer

Chrysobothris sexfasciata SCHAEFFER, 1918, Jour. New York Ent. Soc., vol. 26, pp. 212, 213.

This was the most common buprestid on the island, and 104 specimens were collected on dead twigs of a number of species of plants, both at night and during the day. The series is rather uniform in the brilliant green markings, but the ground color varies from almost black to purplish black.

TYPE LOCALITY: Key West, Florida.

NEW RECORDS FOR BAHAMA ISLANDS: South Bimini, June 5-18, 1950.

***Chrysobothris chryseola leneri*, new subspecies**

Figures 1A and B

Similar to *C. chryseola* (Illiger) but differing from it by having the clypeus more deeply incised medially, anterior pronotal margins more widely expanded and acute, elytra with basal brilliant green maculation transverse, extending along basal margin from basal impression to inner edge of humeral umbone, submedian bands continuous and slightly oblique, extending from near suture to lateral margins, subapical bands continuous, straight, extending from near suture almost to lateral margin. Male genitalia the same as in *C. chryseola*. Male with apical margin of last abdominal segment evenly emarginate; female with margin sinuate, slightly produced medially.

TYPE MATERIAL: Holotype male, allotype female collected on South Bimini Island, Bahamas, British West Indies, June 9 and 14, 1950 (M. A. Cazier and F. Rindge). Three male and one female paratopotypes, June 7-18. All types are in the American Museum of Natural History.

This subspecies resembles *C. lepida* Castelnau and Gory from Cuba, but can be distinguished by the male genitalia, less brilliant coloration both above and below, and by the more expanded anterior pronotal angles. In *C. chryseola leneri* the color above is almost black or with dark purplish reflections, and the under surface is all black.

This subspecies is named in honor of Mr. Michael Lerner.

***Chrysobothris lepida* Castelnau and Gory**

Figures 1C and D

Chrysobothris lepida CASTELNAU AND GORY, 1836, Histoire naturelle . . . des insectes coléoptères, vol. 2, p. 16, pl. 3, fig. 23.

There is considerable doubt as to whether or not this species actually occurs in the Bahamas, since those specimens from

Bimini that might be referred to this species have been found to be distinct on the basis of the male genitalia. However, Fisher (1925) records it from Long Island, Bahamas, and there is another specimen in the United States National Museum labeled Nassau, Bahamas. Specimens from these localities may belong to *C. chryseola leneri*, and, if so, *C. lepida* is known only from Cuba.

TYPE LOCALITY: Cuba.

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